PHONE: (509) 982-2181 TOLL FREE: (888) 982-2181

FAX: (509) 982-2238

Thursday, September 02, 2004

Dear Sirs,

As a WISP servicing very rural Washington state for nearly 5 years I've learned a few things about delivering broadband via wireless. First, there is not an interest problem as has been stated in this proceeding, there's a time problem. WISPs are growing fast and their time and money is focused on their local customers not the regulatory, legislative or investment communities.

Next, in heavily treed areas or sparsely populated zones it takes horsepower to make a business plan work. One has to service X number of customers from a distribution point. But more power with limited spectrum tends to cause tower sites to cause interference to each other at ever greater ranges.

Sharing of the spectrum with every municipality, cell phone co., security co., etc. etc. etc. is part of life for us but it's getting harder and harder to keep our systems stable while we scale them to meet the demands of the market place.

There are those that think this is just begging for trouble and those that say so what, that's just another reason why we need more licensed spectrum.

Whether anyone likes it or not the gutting of the '96 telecom act has created an amazing new industry. I called ONE medium sized distributor and was told that they show 3400 WISPs in their system. I called ONE manufacturer (not sold by the above distributor) and was told that they've sold 300,000 client radios into the USA market alone. Estimates of 8000 wisps and 1,000,000 subscribers may be optimistic but not by much. This is the new family farm!

The licensed community has huffed and puffed their way into keeping 2.5 GHz licensed. It was licensed before, what's being done with it? Danged little in most areas, NOTHING in my area. Parts of 700 MHz have been auctioned off. How many of those companies are actually building out networks that service large unserviced or

under serviced communities? I've not heard of much happening there either. All of the action in the wireless industry is still in cell phones (voice not data), Sat. TV, and unlicensed networking - often broadband internet.

3650 to 3700 is a relatively small band. Lets turn the manufacturers loose to build gear for the WISPs and see what they come up with. There's equipment out there for the band as it's used in much of the rest of the world. This should be relatively easy. I'd like to see some form of spectrum etiquette this time, no more radios that use the whole band at once. Lets have a max channel size, say 6 mhz, then we have 6 nicely none overlapping channels (since the in thing seems to be 60* sectors on APs this should work out well). With OFDM Aperto delivers 15 MBps so there's plenty of capacity for many years as most broadband users actually get around 1000 maybe 2000 KBps today. Even with Moore's Law applied to broadband we'd still have nearly a decade to come up with a better compression mechanism.

Lets make this band available only for outdoor data networks. (Not intended to eliminate indoor CPE, but rather spy cameras, toys, garage door openers etc.)

Allow much higher power levels, even with omni antennas, but ONLY in VERY low density zones. Out here we measure most areas by square miles per home not homes per square mile. Require sectors in urban deployments where customer density and competitive collocation issues in the same town will be an issue.

In general, keep things fairly flexible but put rules in place to keep greedy/unscrupulous operators from screwing up the entire band in any given coverage zone.

The fact is that the WISPs are putting competitive pressures on the cable/DSL duopoly. WISP are deploying in rural America before urban America. WISPs are rapidly bridging the digital divide and they are doing so with hard work and creativity. They should be supported at every opportunity and in ways that do not limit the ability for new creative people to enter the industry.

Sincerely,

Marlon K. Schafer

Owner

Odessa Office Equipment